

Stream Obstructions & Levees Rules and Regulations

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Statutes

- Under K.S.A. 82a-301 through 305a
 - Stream obstructions (except dams)
 - Channel modifications
- Under K.S.A. 24-126
 - Fills in floodplains
 - Levees



Statutes

- K.S.A. 82a-301 through 305a (Obstructions in Streams Act)
 - Protect public safety
 - Protect property
- K.S.A. 24-126 (Levee Law)
 - Must be feasible
 - Must not be adverse to public interest

Objectives

- Last comprehensive update 1987
- New project types
- Technology



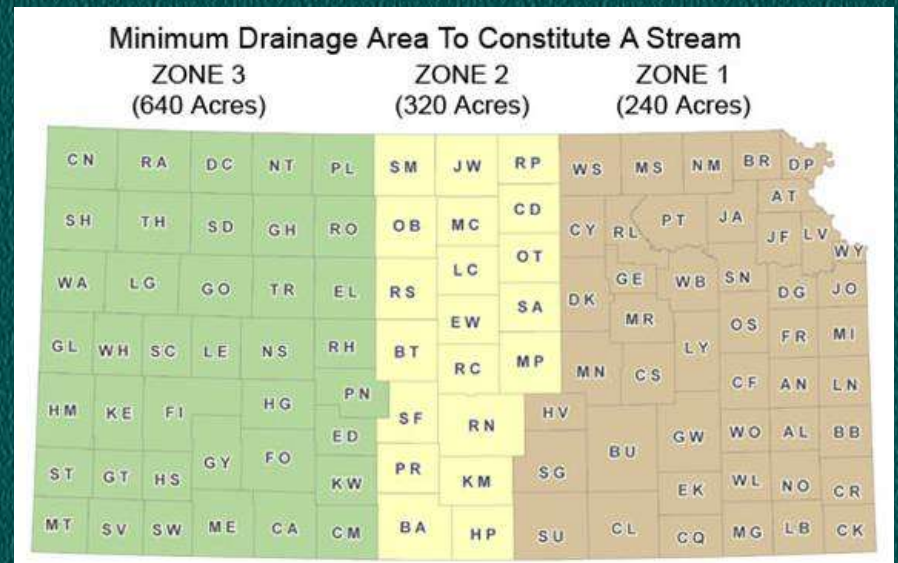
Overview

- Channel Changes
- Stream Obstruction (5 types)
- Levees and Fills



What's Not Changing

- Definition of a stream
- Definition of a fill
- Definition of a dam
- When an engineer is required



Common Changes

- Permits will be issued to landowners
- Benchmark requirements
- Unreasonable effect
- Plan requirements
- Organization



Channel Changes

- Design requirements unchanged
 - Side slopes
 - Conveyance
 - No construction by erosion
 - Vegetative strip

Channel Changes

- Changes
 - Procedures for after-the-fact projects
 - Definition of “natural” channels
 - Clarification of what requires a permit
 - Benchmark for waterways
 - Table of maximum velocity

Channel Changes

A constructed channel

- Built before 1978
- Unmodified since

Shall be considered a natural channel



Channel Changes

Maintenance – Modified Channels

- Permitted changes
 - Remove debris
 - Remove earth to approved lines
- Unpermitted changes
 - Remove debris

Channel Changes

Maintenance – Natural Channels

- Natural channel
 - Remove debris
- Near stream obstruction
 - Remove debris
 - Remove earth to approved lines



Questions



Stream Obstructions

- General permits
- Governmental road and bridge
- Small impoundments
- Aggregate mining
- Miscellaneous

Emergency Approvals

- Provide
 - Applicant
 - Landowner
 - Location and description
 - Reason approval needed
- Provide plans within 30 days or remove project

Beneficial Use of Water

- Must have permit to appropriate
- Built of temporary materials
- Must be removed after season over
- Less than 2 feet high
- Below bank
- Cannot back water onto another

Maintenance

- Requires proper maintenance of obstructions
 - Conform to approved plans
 - Provide designed conveyance
 - Insure integrity of the structure



Government Bridge Projects

- Plans
- Specifications
- Hydraulic analysis
- Requirements to permit

Government Bridge Projects

- Plans
 - Pre- and post-project flow paths for out of channel flow
 - Borrow area locations

Government Bridge Projects

- Specifications
 - Minimum quality of materials and workmanship
 - Materials
- Citing KDOT specs sufficient
- Citing local specs sufficient if available

Government Bridge Projects

- Analysis
 - Adding the overtopping event
 - Specifying locations of velocity and water surface evaluations

Government Bridge Projects

- Requirements to permit
 - No unreasonable effect
 - Cannot move location of overflow without owners' permission



Questions



Small Impoundments

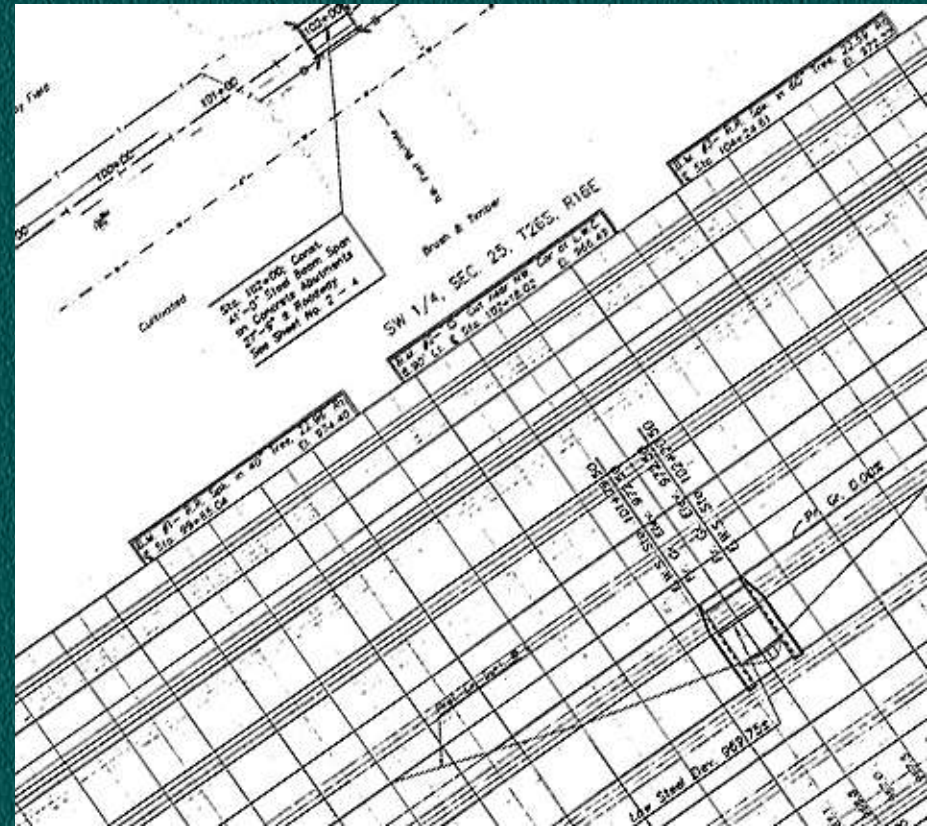
- Downstream hazards
- Plans
- Design criteria
- Requirements to permit

Small Impoundments

- Downstream hazards
 - Visual examination
 - $\frac{1}{2}$ height
 - Breach map
- No hazards – miscellaneous
- Hazards – small impoundment

Small Impoundments

- Plans
 - Simple version of plans for dams



Small Impoundments

- Design criteria
 - Cutoff trench
 - Minimum side slopes
 - Settlement allowance
 - Top of dam elevation
 - At least one uncontrolled spillway
 - Spillway design requirements

Small Impoundments

- Requirements to permit
 - Cannot have unreasonable effect
 - Meets all design criteria
 - Benchmark



Aggregate Mining

- Plans
- Benchmarks and control points
- Buffer zones
- Setback
- Requirements to permit

Aggregate Mining

- Plans
 - Essentially unchanged



Aggregate Mining

- Benchmarks and control points
 - Benchmarks as other types
 - Control points are similar to benchmarks

Aggregate Mining

- Buffer zones
- Operation (revoked)
- Operations conflicting (revoked)



Aggregate Mining

- Setback currently:
 - Minimum 2:1 slope on pit walls
 - 50 feet minimum setback
- Setback proposed:
 - 50 feet minimum setback
 - Pit wall slope of 4:1 or steeper has greater setback requirement

Questions



Miscellaneous Projects

- Plans
- Hydraulic analysis
- Requirements to permit

Miscellaneous Projects

- Culverts
- Plan requirements



Questions



General Permits

- For relatively simple projects
- Expedited ECA
- \$100 application fee



General Permits

- Bridge replacements
- Small aggregate removal operations
- Pipeline crossings
- Temporary bridges
- Minor stream obstructions
- Bank stabilization

Bridge and Culvert Replacement Projects

- Delete “no plans” option
- Channel modification 200 feet
- Remove vegetative strip



Aggregate Removal

- Continues exemption for < 50 sq mi
- Must be 100 feet from intakes, bridges, other features

Pipeline Crossings

- Clarification of 50 sq. mile drainage area “exemption”
 - Must have 5 feet of cover to not need permit



Non-permanent Bridge Replacements

- Application
 - Location map
 - Typical cross section
- Waterway opening must
 - Pass mean annual flow rate
 - Cross section at least 3 sq. feet
 - Must not impair water rights

Non-permanent Bridge Replacements

- Must be
 - Within 100 feet of original bridge
 - No more than 100 feet of channel work
- Within 365 days
 - Remove
 - Apply for permit for permanent structure

Minor Stream Obstructions

Obstruction will not:

- (1) decrease the cross-sectional area of a stream channel by more than 15% at the elevation of the low bank
- (2) be located in the floodway

Minor Stream Obstructions

Limited to

- weirs
- causeways
- low-water crossings
- low-head dams
- intake and outfall structures
- boat launching ramps
- other structures with limited impact on stream flow

Minor Stream Obstructions

Plans

- General location map
- Typical cross section



Bank Stabilization

For

- Channel modifications
- Stream obstructions

Related to otherwise exempt projects

Bank Stabilization

To qualify a channel modification is limited to:

- 3.5 times length of jetty above and below the protected reach
- 2 times width of channel above and below ends of revetment
- Bank slope of 2:1
- Cannot reduce conveyance

Bank Stabilization

Plans

- Location map
- Typical cross section(s)

Bendway
weirs
defined as
jetties



Questions



Levees and Fills

- Definitions
- Class B and C levees
- Levee design criteria
- Fill design criteria
- Exemptions
- Emergency repairs
- Maintenance

Levees and Fills

- Definitions
 - Levee
 - Used to be defined in terms of a floodplain fill
 - Proposed to be defined independently



Levees and Fills

- Class B and C levees
 - Specifications
 - Construction inspection
 - Design report



Levees and Fills

- Exemptions
 - Currently, exempt certain small fringe projects
 - Proposed
 - Exempt 160 cy projects in Zone A
 - Exempt 16 cy projects in floodway

Levees and Fills

- Emergency repairs
 - Provides for verbal request and approval
 - Within 60 days provide report and plans of repair
 - If levee not permitted, get a permit



Questions



Internal Process

- DWR working group
 - First draft
 - Preliminary review
- Public meeting(s)
- Working group again
 - Final draft
 - Final internal review
- Submit to Chief Engineer



Formal Rules Process

- Secretary of Agriculture review
- Review by Department of Administration and Attorney General
- Notice of public hearing
- Legislative Joint Committee on Rules and Regulations reviews

Formal Rules Process

- Public hearing held
- Chief Engineer adopts, rejects, or amends
- If adopted, effective 15 days after publication in Kansas Register

Comments

Send to:

WaterStructures@kda.state.ks.us

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Questions and Comments

